

RESPONSE AND REQUEST FOR RECONSIDERATION

In response to the Office Action of December 5, 2005, Applicants hereby request the Examiner to reconsider the claims in view of the present amendment and remarks.

Applicants have amended independent claims 1 and 19 by specifying that the hydrocarbyl phosphite contains at least 12 carbon atoms on the hydrocarbyl group. Support for this amendment is found in claim 3 of the application as filed. In view of the amendment highlighted, Applicants further cancel claim 3 without prejudice.

The Examiner has rejected to a claims 4-13, 15 and 16 as not meeting the requirements of 35 U.S.C. 112, second paragraph. Applicants have amended the highlighted claims by:

- (a) inserting the term “the group consisting of” into claims 4 and 8.
- (b) deleting the term “selected from the group consisting of”; and the term “and mixtures thereof” from claims 7 and 15.
- (c) Claims 7 and 15 has the term “or mixtures” thereof added.
- (d) Claim 15 further has had the term “an” added for grammatical correctness.

The amendments highlighted above to claims rejected by the Examiner under 35 U.S.C. 112 should now obviate these rejections.

With regard to claim 16, it is believed that proper Markush language has been used and no clarifying amendment is needed. If the Examiner still believes there is some additional error so that the language is incorrect, Applicants respectfully request a more complete explanation to why it does not meet the requirements of 35 U.S.C. 112, second paragraph.

The Examiner has asserted that the title as filed is non-descriptive and has proposed an alternative title. Applicants accept the title as proposed by the Examiner.

With regard to Applicants’ obligations under 37 CFR 1.56, Applicants submit that all inventors were at the time of the invention employed by the Applicant. As a consequence, the invention was commonly owned. Therefore, no information relating to invention dates etc. is required to be presented to the Examiner.

The Examiner has not indicated a 35 U.S.C. 102 rejection; therefore the present invention is taken to be novel over the prior art cited by the Examiner.

The Examiner has rejected claims 1-5, 8-10, 14, and 16-22 of the present invention under 35 U.S.C. 103(a) as being unpatentable over Sumiejski et al. (US 6,103,673) in view of Vinci et al. (US 5,334,329).

The Examiner is of the position that Sumiejski discloses a transmission fluid with about 10 to 50 percent of an oil of lubricating viscosity and 0.14 to 0.25 percent by weight of a hydrocarbyl phosphite, wherein the number of carbon atoms is at least 8 and preferably at least 12. The composition further contains a friction modifier including fatty acid amides, fatty amines, alkoxylated fatty amines, and hydrocarbyl imidazolines

containing at least 12 carbon atoms in the hydrocarbyl group. The friction modifiers also include borated epoxides.

The Examiner believes that the differences between Sumiejski and the present invention are the requirements that a borated dispersant is added to the composition and, further, that the borated dispersant is derived from an N-substituted long chain alkenyl succinimide.

The Examiner states that since Vinci discloses ashless dispersants including borated dispersants, the combination of Sumiejski with Vinci will result in the composition of the present invention. Applicants respectfully traverse.

Applicants submit that Sumiejski discloses a composition comprising a number of lubricant additives and at least 0.1 weight percent of a phosphorus containing compound. Sumiejski discloses between column 9, line 34 and column 15, line 33 a vast number of different possibilities that may be used as a phosphorus containing compound. The phosphorus containing compounds may be prepared from a wide variety of phosphorous or phosphoric acids, thiophosphorous and thiophosphoric acids, phosphite esters, phosphate esters, thiophosphate esters and thiophosphite esters (column 9, lines 44 to 47), phosphorus containing amides (column 12, lines 53 to 65), phosphorodithioic acids (column 14, lines 44 to 63), and metal salts of dithiophosphoric acids (column 14, line 64 to column 15, line 21).

In the Examples (column 20, line 20 to column 22, line 60) a wide variety of phosphorus compounds are likewise employed. The phosphorus compounds include dibutyl hydrogen phosphite, dihexyl hydrogen phosphite, diphenyl hydrogen phosphite, sulphurised triphenylphosphite, zinc dithiophosphate or phosphoric acid. Given the guidance taught in the examples, a person skilled in the art would be motivated to include a phosphorus compound derived from an alkyl or aryl hydrogen phosphite containing 6 or fewer carbon atoms on each alkyl or aryl group. Sumiejski discloses in examples 1 to 12, at least one of dibutyl hydrogen phosphite, dihexyl hydrogen phosphite or diphenyl hydrogen phosphite as the suitable phosphorus compounds.

In contrast the present invention specifies that a hydrocarbyl phosphite contains at least 12 carbon atoms on the hydrocarbyl group. Applicants have unexpectedly discovered that by using a hydrocarbyl phosphite with at least 12 carbon atoms on the hydrocarbyl group that lubricating compositions containing said material have improved properties. Specifically, the improved properties include satisfactory wear properties and acceptable anti-shudder properties. The wear and anti-shudder properties are two of the objectives of the present invention as stated in paragraph three of the specification. The attached declaration by James Sumiejski demonstrates the unexpectedly improved properties.

The data contained in the attached declaration demonstrates that compositions of the present invention have unexpectedly improved properties over Sumiejski. The data

compares Example 3 of Sumiejski with a similar composition except using a hydrocarbyl phosphite where each hydrocarbyl group contains 16 to 18 carbon atoms. Applicants submit that Example 3 of Sumiejski is the closest teaching of that references as it has the fewest differences compared to the present invention. The compositions were evaluated based on the methodologies of the industry specification MERCON V, more specifically the MERCON V μ -V characterization of plate wear and anti-shudder properties. The test data obtained indicates that the plate wear of Example 3 of Sumiejski is 0.42 mm, and after 85 hours the anti-shudder analysis developed a negative slope. In contrast, the present invention has a plate wear value of only 0.2 mm, and even after 115 hours there is not a negative slope in the anti-shudder analysis. Both characteristics indicate an unexpected improved performance over Sumiejski. Applicants submit that the present invention therefore is non-obvious over Sumiejski.

The same reasoning applies to the rejections of claims 6, 7 and 16 over Sumiejski, Vinci, and further Tagliamonte, and claims 11-13 over Sumiejski, Vinci, and further Farng et al. Neither Tagliamonte nor Farng provide any teaching that would be contrary to the arguments above. Accordingly, these dependent claims, being necessarily narrower than claim 1, are also unobvious.

For the foregoing reasons it is submitted that the present claims are in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favourable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any additional required fees, or any insufficiency or overpayment of fees, should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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